

Appl. No. 09/856,850  
Amdt. dated December 15, 2004  
Reply to Office Action of December 7, 2004

PATENT

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

- 1.-4. (Cancelled)
5. (Currently amended) A composition comprising a first thermostable *Archeoglobus fulgidis* enzyme exhibiting 3'-5' exonuclease activity but essentially no DNA polymerase activity and a second enzyme exhibiting DNA polymerase activity, wherein said first thermostable *Archeoglobus fulgidis* enzyme is active under the incubation and temperature conditions of a polymerase chain reaction, said composition enhancing the fidelity of an amplification process in comparison to the use of the single second enzyme.
6. (Previously presented) The composition according to claim 5 wherein the second enzyme is lacking proofreading activity.
7. (Previously presented) The composition according to claim 6 wherein the second enzyme is *Taq* polymerase.
- 8.-17. (Cancelled)
18. (New) The composition of claim 5, wherein the first thermostable *Archeoglobus fulgidis* enzyme is encoded by DNA which hybridizes to a primer having a sequence as shown in SEQ ID NO: 1 and a primer having a sequence as shown in SEQ ID NO: 2.
19. (New) The composition of claim 18, wherein the first thermostable *Archeoglobus fulgidis* enzyme is SEQ ID NO: 21.